

Appendix B: Permit Registration Documents

Permit Registration Documents included in this Appendix:

Included in SWPPP	Permit Registration Document (in addition to a copy of the SWPPP)
N	Notice of Intent
Y	Risk Level Determination
N	Certification
N	Post-Construction Requirements, if applicable
N/A	Post-Construction Water Balance Calculator, if applicable
N/A	Copy of Annual Fee Receipt
N/A	ATS Design Documents, if applicable
N/A	Passive Treatment Design Documents, if applicable
Y	Site Maps and Drawings, see Appendix A



National Pollutant Discharge Elimination System (NPDES)

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Rainfall Erosivity Factor Calculator for Small Construction

Introduction

EPA's stormwater regulations allow NPDES permitting authorities to waive NPDES permitting requirements for stormwater discharges from small construction sites if:

- the construction site disturbs less than five acres, and
- the rainfall erosivity factor ("R" in the revised universal soil loss equation, or RUSLE) value is less than five during the period of construction activity.

If your small construction project is located in an area where EPA is the permitting authority and your R factor is less than five, you qualify for a low erosivity waiver (LEW) from NPDES stormwater permitting. If your small construction project does not qualify for a waiver, then NPDES stormwater permit coverage is required. Follow the steps below to calculate your R-Factor.

LEW certifications are submitted through the NPDES eReporting Tool or "CGP-NeT". Several states that are authorized to implement the NPDES permitting program also accept LEWs. Check with your state NPDES permitting authority for more information.

- Submit your LEW through EPA's eReporting Tool <<https://www.epa.gov/npdes/submitting-notice-intent-noi-notice-termination-not-or-low-erosivity-waiver-lew-under>>



- List of states, Indian country, and territories where EPA is the permitting authority (pdf) <<https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-b-areas-of-permit-cover.pdf>>
- Construction Rainfall Erosivity Waiver Fact Sheet <<https://www.epa.gov/npdes/construction-rainfall-erosivity-waiver-fact-sheet>>
- Small Construction Waivers and Instructions (pdf) <<https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-c-waivers.pdf>>

The R-factor calculation can also be integrated directly into custom applications using the R-Factor web service <<https://epa.gov/api-docs/>>.

Steps to Calculate an R Factor for your Small Construction Project

- 1 Select the estimated start and end dates of construction by clicking the calendar icons below and using the dropdown calendar. The period of construction activity begins at initial earth disturbance and ends with final stabilization.

Start Date:

12/01/2025

End Date:

08/25/2026

- 2 Locate your small construction project by entering the address in the search box or by clicking on the map.

Location:

970 Arlington Dr, Costa Mesa, CA 92626

Search



3 Click the "Calculate R Factor" button below.

Calculate R Factor

Facility Information

Start Date: 12/01/2025	Latitude: 33.6694
End Date: 08/25/2026	Longitude: -117.8956

Calculation Results

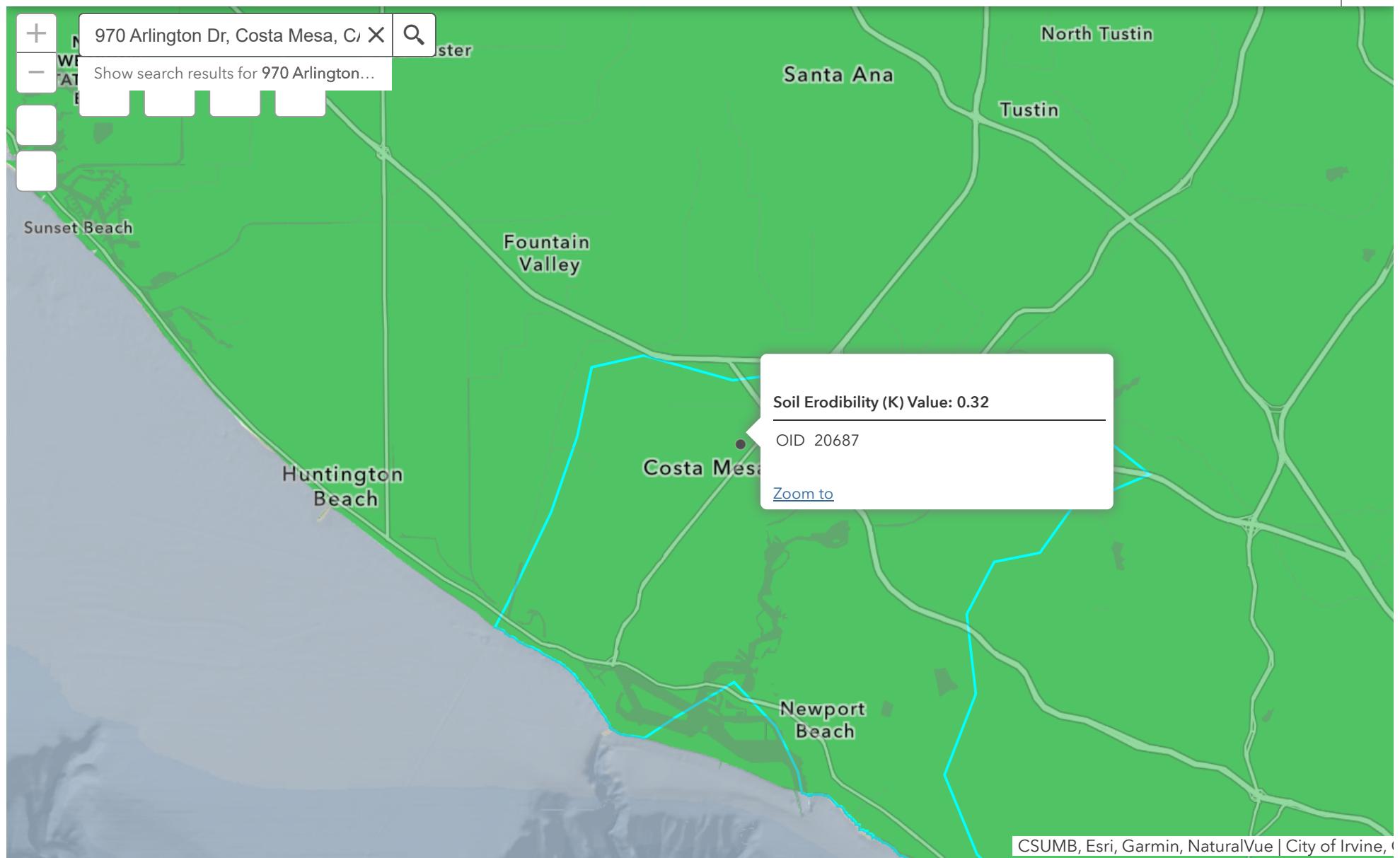
Rainfall erosivity factor (R Factor) = 30.58

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage.

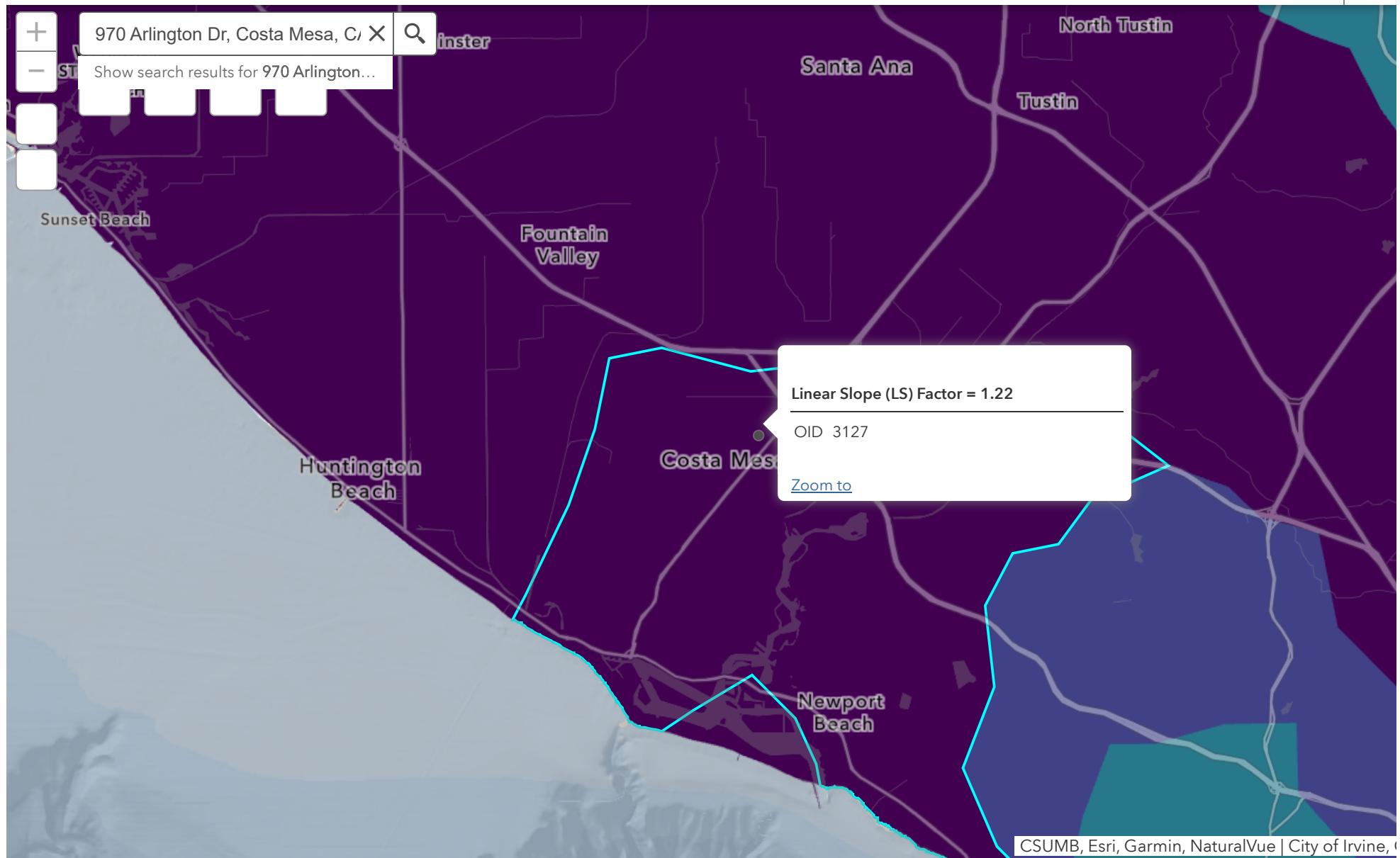


2022 Construction Stormwater General Permit Soil Erodibility (K) Factor Map Tool



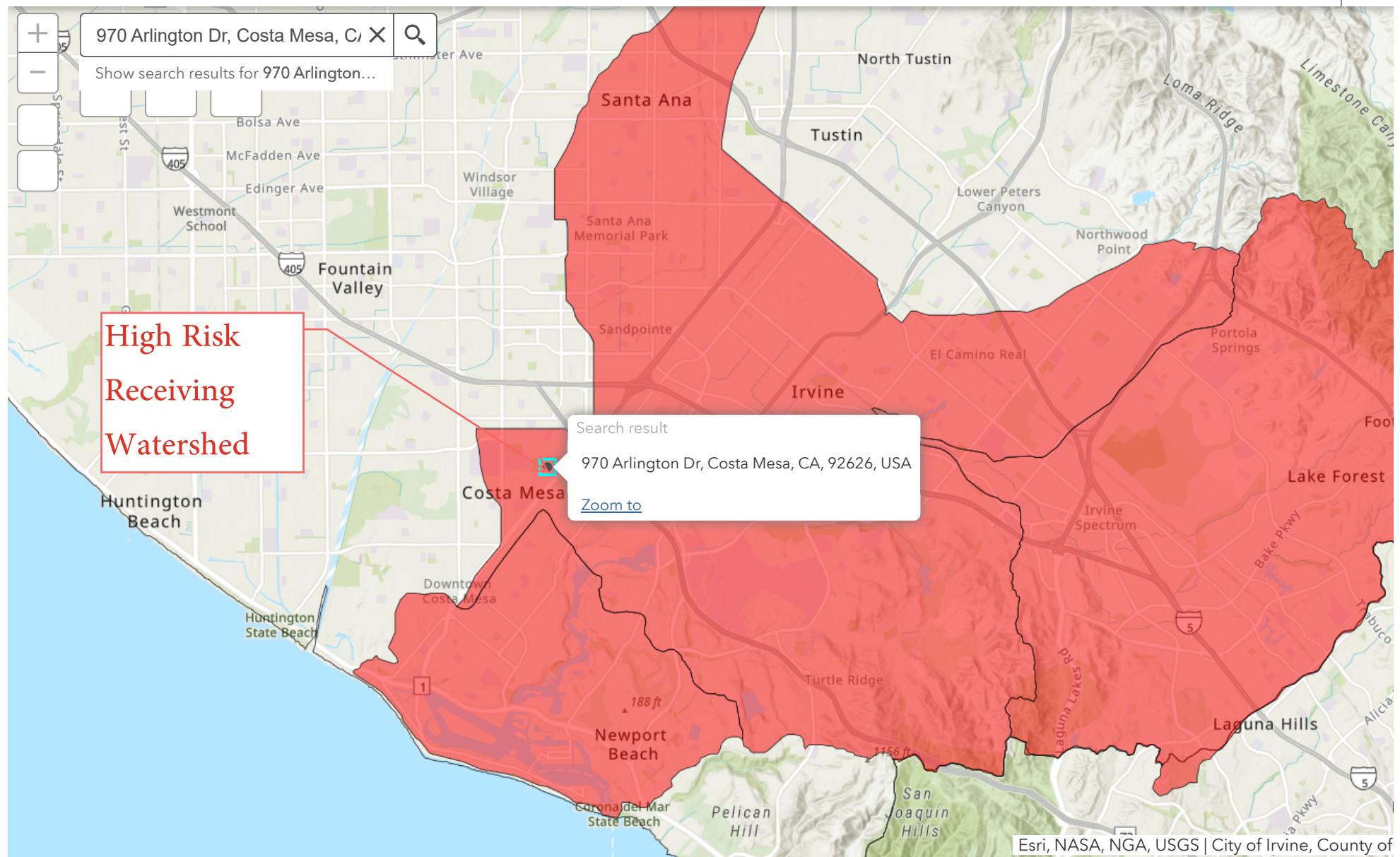
App State

Click to restore the map extent and layers visibility where you left off.



App State

Click to restore the map extent and layers visibility where you left off.



App State

Click to restore the map extent and layers visibility where you left off.

	A	B	C	
1	Sediment Risk Factor Worksheet		Entry	
2	A) R Factor			
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.			
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm			
5		R Factor Value	30.58	
6	B) K Factor (weighted average, by area, for all site soils)			
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.			
8	Site-specific K factor guidance			
9		K Factor Value	0.32	
10	C) LS Factor (weighted average, by area, for all slopes)			
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.			
12	LS Table			
13		LS Factor Value	1.22	
14				
15	Watershed Erosion Estimate (=RxKxLS) in tons/acre		11.938432	
16	Site Sediment Risk Factor		Low	
17	Low Sediment Risk: < 15 tons/acre			
18	Medium Sediment Risk: >=15 and <75 tons/acre			
19	High Sediment Risk: >= 75 tons/acre			
20				

Receiving Water (RW) Risk Factor Worksheet

Entry Score

A. Watershed Characteristics

yes/no

A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?:

http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

OR

A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan)

http://www.waterboards.ca.gov/waterboards_map.shtml

Yes

High

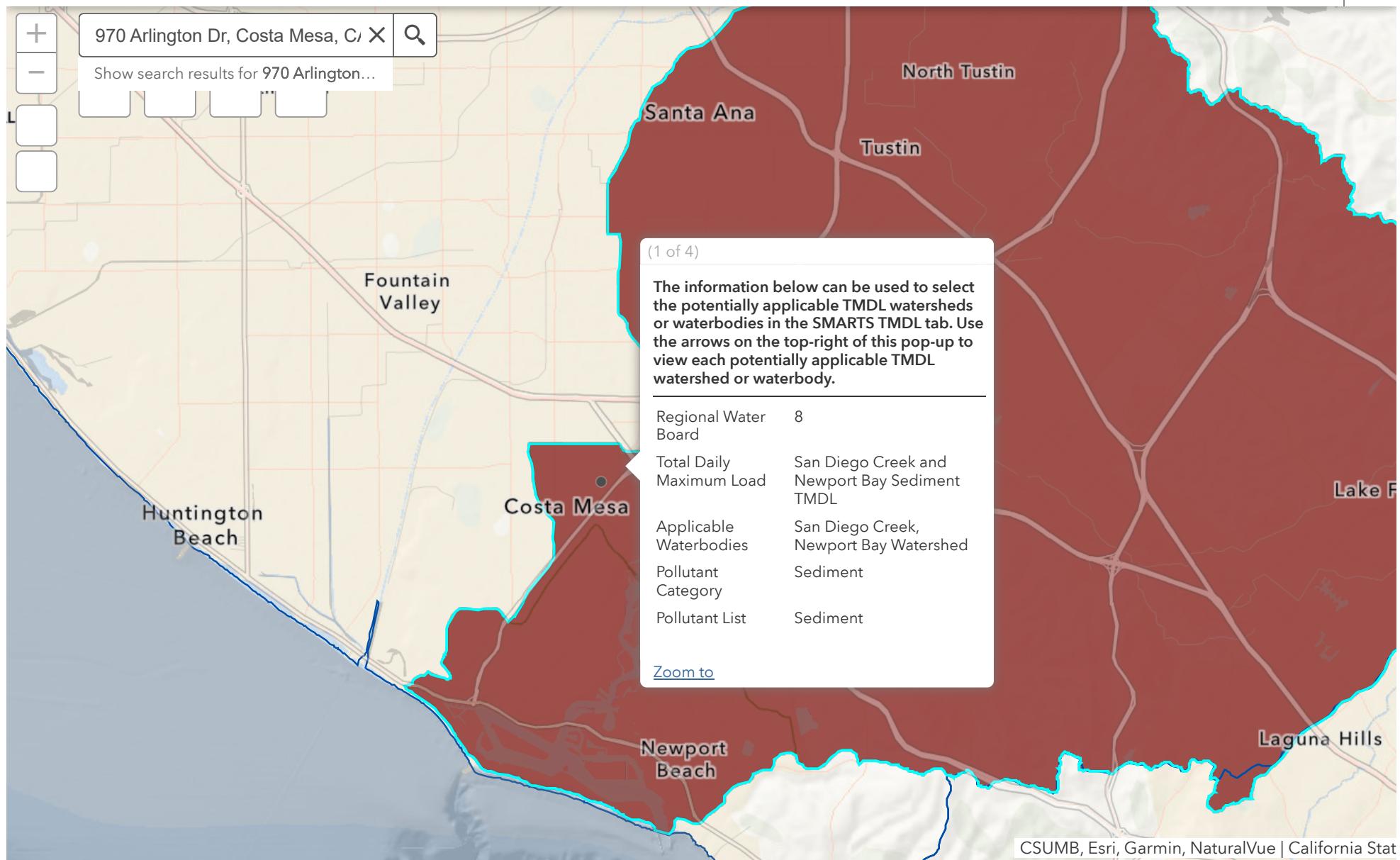
Combined Risk Level Matrix

		Sediment Risk		
		Low	Medium	High
Receiving Water Risk	Low	Level 1	Level 2	
	High	Level 2		Level 3

Project Sediment Risk: **Low**

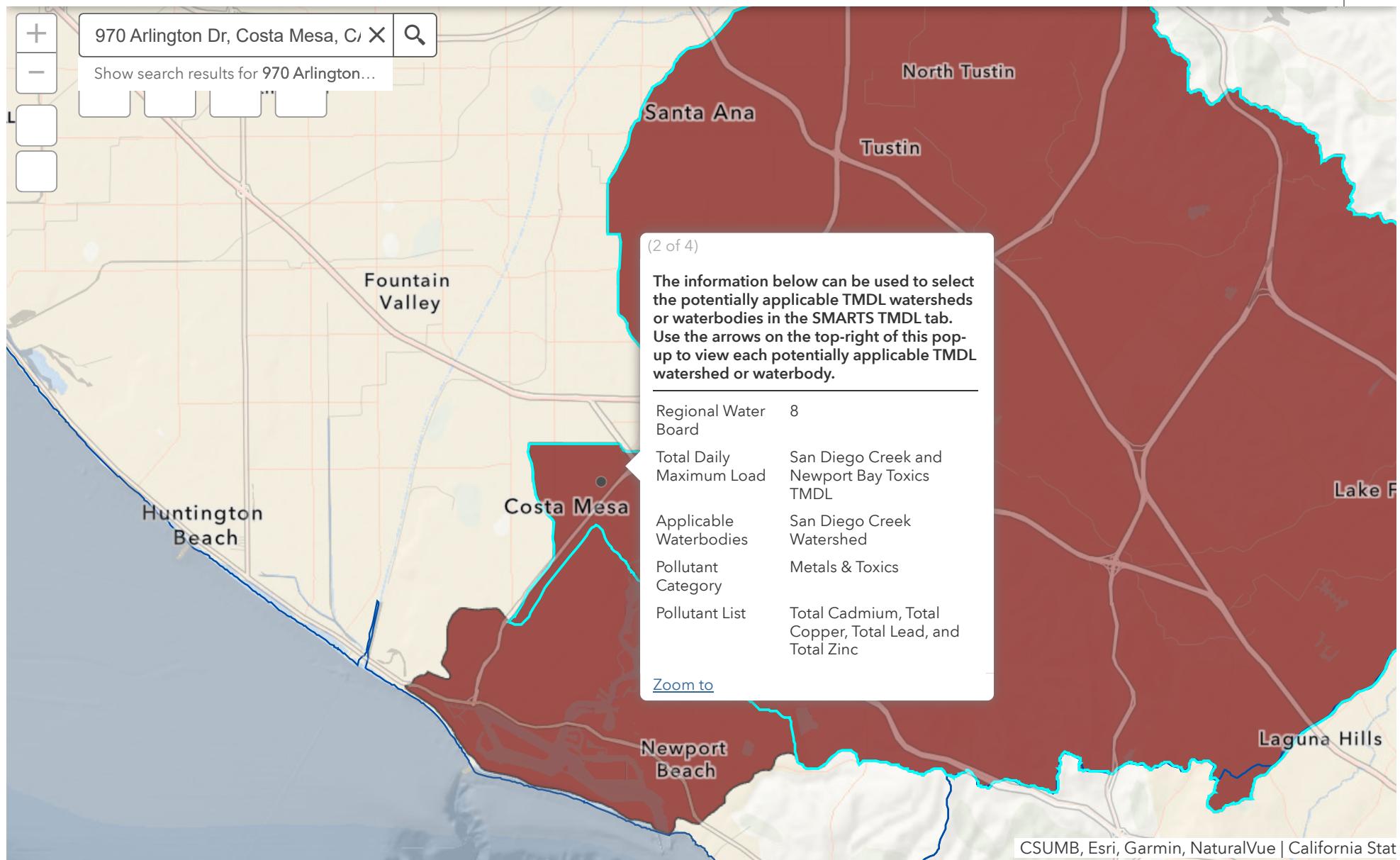
Project RW Risk: **High**

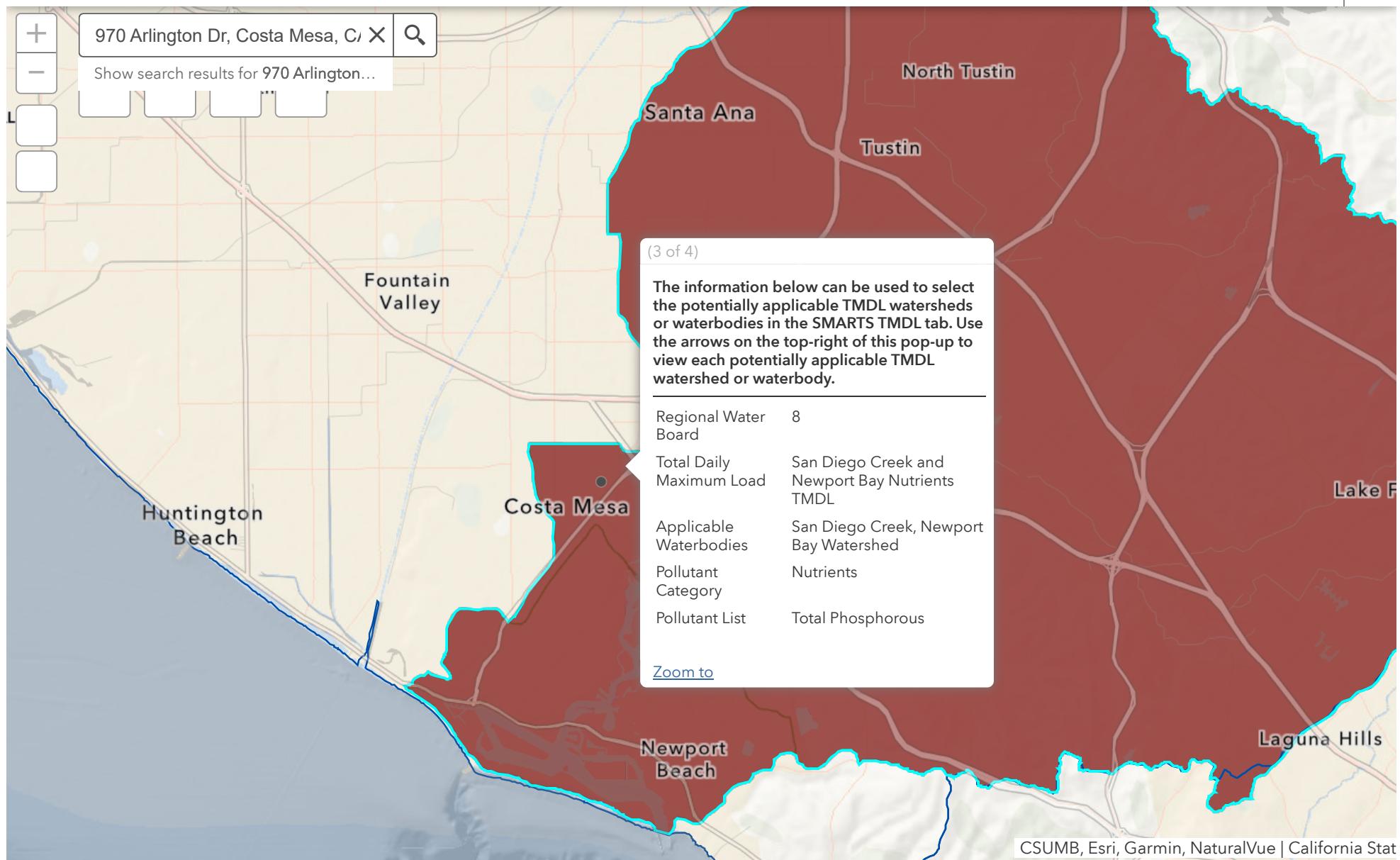
Project Combined Risk: **Level 2**



2mi

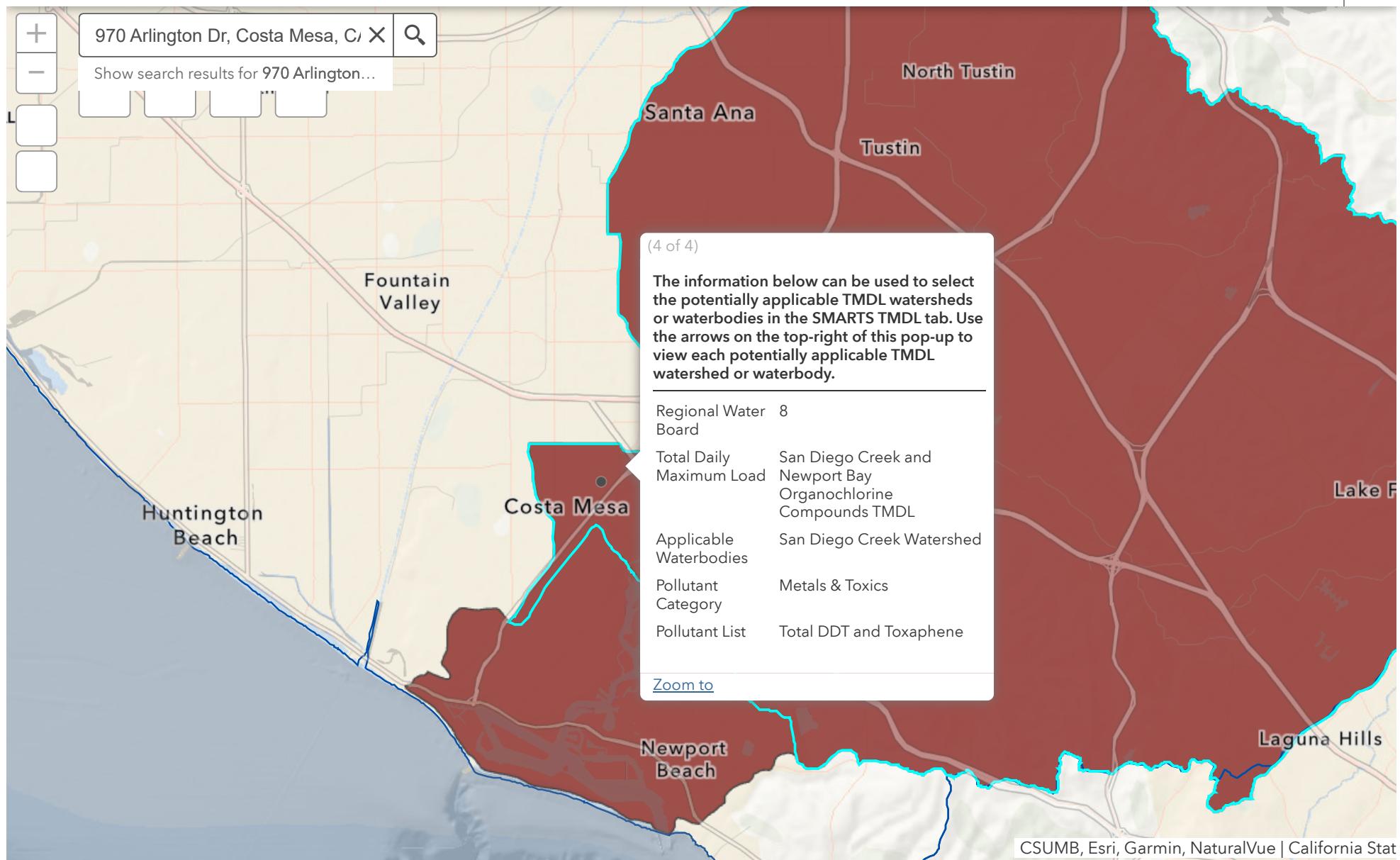
-117.704 33.772 Degrees





2mi

-117.793 33.772 Degrees



2mi

-117.835 33.773 Degrees